



Composite image maintain the same lighting condition. The lighting condition of the composite image could even be a third condition such as moonlight.

Brief Summary Text - BSTX (20):

While editing a color image, a person may wish to perform a particular color manipulation or operation on only a certain color or group of colors rather than all the colors of the image. This certain color or group of colors defines a mask. Alternatively, one may wish to perform a particular color manipulation or operation on all colors of an image except a certain color or group of colors. This is accomplished by taking all the colors of the image except those defined by the first group of colors through an inversion process. Present technology allows use of colors, but only for an area of the image, and then using only one color at a time. An area is a portion of or the entire image used as a background or base image, and is considered to be a single layer. Thus, it would be an advance in the technology to provide multi-color mask technology for use in image manipulation. These masks would apply to either the entire image, to a selected area of the image, or to objects of the image. A further advance would allow color image manipulation using masks on a series or sequence of related images.

Brief Summary Text - BSTX (21):

Accordingly, a need exists to provide a digital image editing system which can separate the digital image of an object from a background against which the object was imaged. It is a further purpose of the present invention to provide a digital image editing system which can automatically size, position, and layer the digital image of a replacement object or multiple objects into a predetermined background at a desired depth, and then match the lighting conditions of the replacement object with one or more original objects and the background, and to provide a digital image editing system that is easy to implement and cost-effective to use. A need also exists to provide color masking capability to include simultaneous multiple colors and the choice of their usage with objects, areas, or the entire image.

Brief Summary Text - BSTX (36):

Traditional methods for image editing use area selection to identify the pixels of the image that are to be changed. The present invention allows an

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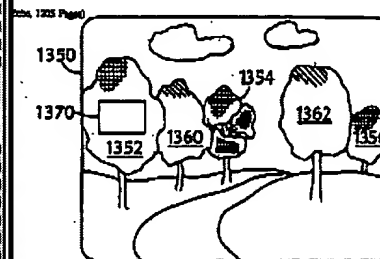


Figure 25a

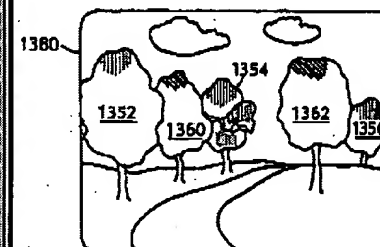


Figure 25b



Detailed Description Text - DETX (91):

With the imaging system 900, images are manipulated faster and more easily than ever before. Most image editing programs offer the ability to manipulate areas of images, but with the imaging system 900, one or more objects in each image can also be manipulated. These objects are easily moved around, enlarged, reduced, or rotated, and even layered over other objects. Objects can be saved for later use with the same or different background files. This ability to select and work with as many objects as desired, set in the familiar and easy-to-use Microsoft Windows environment, provides more flexibility, ease, and speed in image editing.

Detailed Description Text - DETX (92):

In addition to the versatility of multiple objects, the imaging system 900 offers many other features in creating professional graphic images. With the variety of selection tools, painting tools, and special effects available in the imaging system 900, images are enhanced with functions as simple as sharpening or as advanced as gradually blending one image into another image beneath it. Complete color editing is available, and text is easily added to images. The term color herein is used to describe hue and shades of hue within a particular color, but also includes hues of gray including the absolutes of black and white. Font style and size of text is easily adjusted, and can be rotated just like an object. Despite the advance capabilities of the imaging system 900, there is no need to worry about mistakes, which are easily corrected with an "undo" function.

Detailed Description Text - DETX (95):

The system includes either a non-interlaced video monitor 906 or an interlaced video monitor 908. If a user has a choice between a non-interlaced monitor 906 and the interlaced monitor 908 and both have equal resolution capability, the non-interlaced monitor 906 is preferred. A monitor designed to the VGA (video graphics array) display standard, or better, is required to use all the features of the imaging system 900.

Detailed Description Text - DETX (103):

Another set of optional components connected to the computer 902 includes a



Patent Number: 5,469,536
Date of Patent: Nov. 21, 1996

Microfilm Edition, by James Brown, 1996 World, Nov. 21, 1996, pp. 1, 80.
Copyright 1996, by James Brown, 1996 World, Nov. 21, 1996, p. 1.
ImageWare steps that 10-step editing process others will soon follow, by James Brown, 1996 World, Nov. 21, 1996, p. 1.

(See continued on next page.)

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[7] ABSTRACT

A system and method for editing digital images in three dimensions includes a computer for storing a digital image of an object and a background, as well as at least one additional background image. Based upon the differences between the lines of the edges of the object and the corresponding background and a predetermined line difference, the computer locates the edges of the object and removes portions of the image (i.e., the background) that are outside the edges. Then, the object can be combined with a predefined one of the other background images so as to form a composite image. Components of the predefined background image are assigned relative positions to the X-Y plane, and are also assigned a value defining their location in one of a plurality of axes which form the Z dimension of the image. The object can be combined with the background to also assign a value defining its location in at least one of these axes. In further embodiments of the invention, colors of either a digital or video image can be selectively assigned to a mask. The colors can be of the video image or even a selected area of the image. Color manipulation can then be performed on just the colors of the image defined by the mask. The mask can be used with the video image, with a selected area of the image, or with digital. Alternatively, the colors of the image defined by an inverted mask are selected by color manipulation.

353 Claims, 41 Drawing Sheets

Microfilm Appendix Indicated
(21 Microfilm, 1320 Pages)



Details Text Image HTML KWIC

Full

